

## HOMEWORK: Proportion Method for Percents

**Objective:** Students will be able to solve for percent, percentage or base.

$$\frac{n}{100} = \frac{\text{Percentage}}{\text{Base}} \quad \text{Proportion Method}$$

$$\text{Percentage} = \text{Base} \cdot \text{Rate} \quad \text{Equation Method, where } \text{Rate} = \frac{n}{100}$$

### Equation Method

**Example:** 24% of 400 is what number?

**Translate the sentence.**

"of" between two numbers means multiplication

"is" means equal to "="

0.24 times 400 is equal to x

$$0.24 \cdot 400 = x \quad \text{Which value is x? Is it Percentage, Base or Rate?}$$

$$\text{Rate} \cdot \text{Base} = \text{Percentage} \quad \text{Therefore } P = 0.24 \cdot 400 \quad P = 96$$

### Proportion Method

**Example:** 24% of 400 is what number?

$$\frac{24}{100} = \frac{P}{400}$$

$$400 \cdot \frac{24}{100} = \frac{P}{400} \cdot 400 \quad P = 96$$

### Solve using the Proportion Method

1. 55 is what percent of 110?	2. What is 85% of 500?
3. 24% of what number is 1050?	4. Find 25% of 528.
5. How much is 78% of 54?	6. 11 <u>out of</u> 29 is what percent? (*out of: Division)
7. 125 of what number is	8. 41 out of what number is 42.7%